

Docket No. 11119RR

**CLAIMS:**

What is claimed is:

- 1 1. A method in a communications system for processing a message in a text  
2 based communications protocol, the method comprising:  
3 receiving a first message from a source application, wherein the first message  
4 includes routing information for routing the first message between the source  
5 application and a target application, and information used by the target application;  
6 generating a second message from the first message, wherein the second  
7 message includes only the information used by the target application;  
8 storing the routing information, wherein the stored routing information is used  
9 when sending a response; and  
10 sending the second message to the target application.
- 1 2. The method of claim 1, wherein the step of storing routing information forms  
2 stored routing information, the method further comprising:  
3 receiving a first response message from the target application;  
4 generating a second response message from the first response message and the  
5 stored routing information; and  
6 transmitting the second response message as the response to the source.
- 1 3. The method of claim 1, wherein the receiving, generating, sending and storing  
2 steps are performed in a management module using the text based communication  
3 protocol.
- 1 4. The method of claim 1, wherein the target application is a C++ application.
- 1 5. The method of claim 1, wherein the source application is a Session Initiation  
2 Protocol (SIP) application.

Docket No. 11119RR

1 6. The method of claim 1, wherein the text based communication protocol is a  
2 Session Initiation Protocol (SIP).

1 7. The method of claim 1, wherein storing the routing information forms stored  
2 routing information and wherein the stored routing information is used to route a  
3 response signal from the target application back to the source application.

1 8. The method of claim 1, wherein the first message is a Session Initiation  
2 Protocol (SIP) message and the source application is a SIP entity.

1 9. The method of claim 1, wherein the second message is a simplified Session  
2 Initiation Protocol (SIP) message and the target application is an X-SIP client  
3 module.

1 10. A method for communicating a message, comprising the steps of:  
2 receiving the message;  
3 determining session context information associated with the message, the  
4 session context information including message routing information;  
5 storing the message routing information, wherein the stored message routing  
6 information is used when sending a response signal;  
7 modifying the message based on the message routing information; and  
8 forwarding the modified message.

1 11. The method of claim 10, wherein the message routing information includes at  
2 least one of a via header, a route header and a record route header.

1 12. The method of claim 10, wherein modifying the message based on the  
2 message routing information includes removing the message routing information  
3 from the message.

Docket No. 11119RR

1 13. The method of claim 10, wherein modifying the message based on the  
2 message routing information includes adding the message routing information to the  
3 message.

1 14. The method of claim 12, wherein the message is received from a server.

1 15. The method of claim 13, wherein the message is received from a client  
2 application.

1 16. The method of claim 10, further comprising:  
2 receiving a client application message from a client application; and  
3 converting the client application message into the message, wherein the  
4 message is a simplified Session Initiation Protocol (SIP) message.

1 17. The method of claim 16, wherein the simplified SIP message does not include  
2 the message routing information.

1 18. The method of claim 16, wherein modifying the message based on the  
2 message routing information includes adding at least one of a "Via" header, a  
3 "Route" header, and a "Record Route" header to the simplified SIP message.

1 19. The method of claim 10, wherein the step of receiving the message further  
2 comprises:

3 receiving the message at an input/output controller;  
4 decoding the message; and  
5 forwarding the decoded message to a context manager.

1 20. The method of claim 10, further comprising:  
2 determining session state information associated with the message;  
3 determining a next session state based on the message and the associated  
4 session context information or the associated session state information; and

Docket No. 11119RR

5 forwarding the modified message to an input/output controller.

1 21. The method of claim 10, wherein the step of forwarding the message further  
2 comprises:

3 encoding the modified message at an input/output controller; and  
4 forwarding the modified message through a socket.

1 22. The method of claim 10, wherein the modified message is an outgoing  
2 message to a Session Initiation Protocol (SIP) server, and wherein the modified  
3 message is forwarded using IP data packets.

1 23. The method of claim 10, wherein the message is received from a Session  
2 Initiation Protocol (SIP) client module.

1 24. The method of claim 23, wherein the SIP client module encodes the message.

1 25. The method of claim 10, wherein the modified message is an incoming  
2 message, and wherein the modified message is forwarded using TCP packets.

1 26. The method of claim 25, wherein the modified message is received by a  
2 Session Initiation Protocol (SIP) client module.

1 27. The method of claim 26, wherein the SIP client module decodes the modified  
2 message.

1 28. The method of claim 10, wherein the message is a Session Initiation Protocol  
2 (SIP) message received from a SIP entity.

1 29. The method of claim 10, wherein the message is a simplified Session  
2 Initiation Protocol (SIP) message received from an X-SIP client module.

Docket No. 11119RR

- 1 30. A data processing system for communicating using a-text based  
2 communication protocol, the data processing system comprising:  
3 first receiving means for receiving a message;  
4 session context information determination means for determining session  
5 context information associated with the message, the session context information  
6 including message routing information;  
7 first storing means for storing the message routing information;  
8 modification means for modifying the message based on the message routing  
9 information; and  
10 first forwarding means for forwarding the modified message.
- 1 31. The data processing system of claim 30, wherein the message routing  
2 information includes at least one of a via header, a route header and a record route  
3 header.
- 1 32. The data processing system of claim 30, wherein the modification means  
2 modifies the message by removing the message routing information from the SIP  
3 message.
- 1 33. The data processing system of claim 30, wherein the modification means  
2 modifies by adding the message routing information to the message.
- 1 34. The data processing system of claim 32, wherein the message is received from  
2 a server.
- 1 35. The data processing system of claim 33, wherein the message is received from  
2 a client application.
- 1 36. The data processing system of claim 30, further comprising:  
2 second receiving means for receiving a client application message from a  
3 client application; and

Docket No. 11119RR

4 conversion means for converting the client application message into the  
5 message, wherein the message is a simplified Session Initiation Protocol (SIP)  
6 message.

1 37. The data processing system of claim 36, wherein the simplified message does  
2 not include the message routing information.

1 38. The data processing system of claim 36, wherein the modification means  
2 modifies the message by adding at least one of a "Via" header, a "Route" header, and  
3 a "Record Route" header to the simplified SIP message.

1 39. The data processing system of claim 30, wherein the first receiving means  
2 includes an input/output controller for receiving the message, a decoder for decoding  
3 the message, and a second forwarding means for forwarding the decoded message to  
4 a context manager.

1 40. The data processing system of claim 30, further comprising:  
2 session state information determination means for determining session state  
3 information associated with the message;  
4 next session state determination means for determining a next session state  
5 based on the message and the associated session context information or the associated  
6 session state information; and  
7 second forwarding means for forwarding the modified message to an  
8 input/output controller.

1 41. The data processing system of claim 30, wherein the first forwarding means  
2 includes:  
3 an encoder for encoding the modified message at an input/output controller;  
4 and  
5 a second forwarding means for forwarding the modified message through a  
6 socket.

Docket No. 11119RR

1 42. The data processing system of claim 30, wherein the modified message is an  
2 outgoing message to a Session Initiation Protocol (SIP) server, and wherein the  
3 modified message is forwarded using IP data packets.

1 43. The data processing system of claim 30, wherein the message is received from  
2 a Session Initiation Protocol (SIP) client module.

1 44. The data processing system of claim 43, wherein the SIP client module  
2 encodes the message.

1 45. The data processing system of claim 30, wherein the modified message is an  
2 incoming message, and wherein the modified message is forwarded using TCP  
3 packets.

1 46. The data processing system of claim 45, wherein the modified message is  
2 received by a Session Initiation Protocol (SIP) client module.

1 47. The data processing system of claim 46, wherein the SIP client module  
2 decodes the modified message.

1 48. The data processing system of claim 30, wherein the message is a Session  
2 Initiation Protocol (SIP) message received from a SIP entity.

1 49. The data processing system of claim 30, wherein the message is a simplified  
2 Session Initiation Protocol (SIP) message received from an X-SIP client module.

1 50. A computer program product in a computer-readable medium for use in a data  
2 processing system for communicating a message, the computer program product  
3 comprising:

4 first instructions for receiving the message;

Docket No. 11119RR

5           second instructions for determining session context information associated  
6 with the message, the session context information including message routing  
7 information;  
8           third instructions for storing the message routing information;  
9           fourth instructions for modifying the message based on the message routing  
10 information; and  
11           fifth instructions for forwarding the modified message.

1   51.    The computer program product of claim 50, wherein the message routing  
2 information includes at least one of a via header, a route header and a record route  
3 header.

1   52.    The computer program product of claim 50, wherein the fourth instructions  
2 include instructions for removing the message routing information from the message.

1   53.    The computer program product of claim 50, wherein the fourth instructions  
2 include instructions for adding the message routing information to the message.

1   54.    The computer program product of claim 50, further comprising:  
2           sixth instructions for receiving a client application message from a client  
3 application; and  
4           seventh instructions for converting the client application message into the  
5 message, wherein the message is a simplified Session Initiation Protocol (SIP)  
6 message.

1   55.    The computer program product of claim 54, wherein the simplified SIP  
2 message does not include the message routing information.

1   56.    The computer program product of claim 54, wherein the fourth instructions  
2 include instructions for adding at least one of a "Via" header, a "Route" header, and a  
3 "Record Route" header to the simplified SIP message.

Docket No. 11119RR

1 57. The computer program product of claim 50, wherein the first instructions  
2 include instructions for receiving the message at an input/output controller,  
3 instructions for decoding the message, and instructions for forwarding the decoded  
4 message to a context manager.

1 58. The computer program product of claim 50, further comprising:  
2 sixth instructions for determining session state information associated with the  
3 message;  
4 seventh instructions for determining a next session state based on the message  
5 and the associated session context information or the associated session state  
6 information; and  
7 eighth instructions for forwarding the modified message to an input/output  
8 controller.

1 59. The computer program product of claim 50, wherein the fifth instructions  
2 include:  
3 instructions for encoding the modified message at an input/output controller;  
4 and  
5 instructions for forwarding the modified message through a socket.

1 60. The computer program product of claim 50, wherein the modified message is  
2 an outgoing message to a Session Initiation Protocol (SIP) server, and wherein the  
3 modified message is forwarded using IP data packets.

1 61. A data processing system for communicating using a text based  
2 communication protocol, the data processing system comprising:  
3 a network interface; and  
4 a client manager, wherein the client manager receives messages through the  
5 network interface, and wherein the client manager comprises a message modifier for  
6 modifying incoming messages and outgoing messages in accordance with context

Docket No. 11119RR

7 information associated with a message, wherein the context information includes  
8 message routing information.

1 62. The data processing system of claim 61, wherein the message routing  
2 information includes at least one of a via header, a route header and a record route  
3 header.

1 63. The data processing system of claim 61, wherein the message modifier  
2 modifies the message by removing the message routing information from the  
3 message.

1 64. The data processing system of claim 61, wherein the message modifier  
2 modifies the message by adding the message routing information to the message.

1 65. The data processing system of claim 63, wherein the message is received from  
2 a server.

1 66. The data processing system of claim 64, wherein the message is received  
2 from a client application.

1 67. The data processing system of claim 61, wherein the client manager receives a  
2 client application message from a client application and converts the client  
3 application message into the message, wherein the message is a simplified SIP  
4 message.

1 68. The data processing system of claim 67, wherein the simplified SIP message  
2 does not include the message routing information.

1 69. The data processing system of claim 67, wherein the message modifier  
2 modifies the message by adding at least one of a "Via" header, a "Route" header, and  
3 a "Record Route" header to the simplified SIP message.

Docket No. 11119RR

1 70. The data processing system of claim 61, wherein the client manager includes  
2 an input/output controller for receiving the message and a decoder for decoding the  
3 message.

1 71. The data processing system of claim 61, wherein the client manager  
2 determines session state information associated with the message and determines a  
3 next session state based on the message and the associated session context  
4 information or the associated session state information.

1 72. The data processing system of claim 61, wherein the client manager includes:  
2 an encoder for encoding the modified message at an input/output controller;  
3 and  
4 a socket for forwarding the modified message.

1 73. The data processing system of claim 61, wherein the modified message is an  
2 outgoing message to a Session Initiation Protocol (SIP) server, and wherein the  
3 modified message is forwarded using IP data packets.

1 74. The data processing system of claim 61, wherein the message is a Session  
2 Initiation Protocol (SIP) message received from a SIP entity.

1 75. The data processing system of claim 61, wherein the message is a simplified  
2 Session Initiation Protocol (SIP) message received from an X-SIP client module.